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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/344,526 | 06/24/1999 | MARK S. CHEE | A-66828-2/DJ | 9163 |

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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

MARSCHER, ARDIN H

| ART UNIT | PAPER NUMBER |
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1631

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/344,526

Applicant(s)

CHEE ET AL.

Examiner

Ardin Marschel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on (Interview of 8/11/05).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-20, 59-65 and 75-108 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 59-65 and 88-92 is/are allowed.
- 6) ☒ Claim(s) 16-20, 75-87, 93-102, 104 and 105 is/are rejected.
- 7) ☒ Claim(s) 103 and 106-108 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. (1 copy).
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action modifies the list of claims rejected etc. as summarized below as compared to the previous office action, mailed 6/15/05, in response to the Exr. Interview Summary of 8/11/05. The response time is restarted as of the mailing date of this action.

Applicants' amendment, filed 4/5/05, has been entered. This amendment has overcome all previous rejections of record.

Applicants' arguments, filed 4/5/05, have been fully considered and they are deemed to be persuasive to overcome previous rejections of record. Unfortunately, upon reconsideration, the following rejections and/or objections are newly applied. They constitute the complete set presently being applied to the instant application.

Due to these newly applied rejections, summarized below, the Finality of the Office action, mailed 12/15/04, is hereby withdrawn.

VAGUENESS AND INDEFINITENESS

Claims 16-20 and 75-87 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preamble of instant claim 16 cites the claimed method as being directed to making a microsphere array. In contrast, the actual claim steps in lines 3-7, lack any microsphere limitation(s). Instead the substrate is cited as being prepared via different "particles" rather than microspheres. Thus, the claim is vague and indefinite as to whether the preamble controls the metes and bounds or the actual claim steps as to

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whether an array is made of microspheres or particles. Clarification via clearer claim wording is requested. Claims which depend directly or indirectly from claim 16 also contain this unclarity due to their dependence.

PRIOR ART

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 16, 18, 75-82, 84-87, 93-102, 104, and 105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hozier (P/N 5,326,691).

Hozier describes micro-scale production and utilization of micro-libraries of cells in the abstract including arrangement therein in a definite two-dimensional pattern. These cells are different particles as instantly claimed as described in Hozier in column 4, lines 7-68, wherein populations and subpopulations are utilized that differ in genetic or phenotypic characteristics. These particle characteristics and patterning is further described in column 7, lines 24-60. A variety of cell attachment practices are described

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in column 9, line 35, through column 12, line 40. Two species of applying cells is disclosed in column 12, lines 25-31, either via computer-controlled micro-applicator or via squirting. The squirting method is deemed a method of applying energy to the cell solution for deposition in a random fashion as to cells therein, however, also patterned in discrete sites as also cited therein. Squirting is also reasonably a type of agitation as required in instant claim 18. The density of cells on the substrate is high as disclosed in column 12, line 65, through column 13, line 38, and clearly is within the density range as required in instant claim 16. An alternate method of attaching cells during array preparation is via an electric field as described in column 14, lines 8-44, or via wicking, both methods of which apply energy to the cells per se for their movement. Discrete sites upon which the different cells are attached on a substrate surface is described via cell positioning which is maintained as their discrete sites via cell array replication as described in column 4, lines 46-68, as also required in the instant claims. The discrete and constant position or location of cells on the surface is also described in column 6, lines 1-34, wherein position correlation between cell types such as mother and daughter are described. It is noted that cells as set forth in the reference comprise different DNA, protein, etc. molecules which are well known binding ligands as in instant claims 75-82. These ligands may be utilized for decoding the array cell locations via various binding reactions as summarized in the reference in column 16, line 1, through column 18, line 36, including nucleic acid, protein, and enzymatic binding practice. Hozier also describes screening with binding ligands performed with staining via binding ligands to other cell features and their locations in column 17, line 67, through column 18, line 10,

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which describes the first and second binding decoder ligand practice as instant claimed in claim 59, for example.

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to practice the above energy application species of micro-library preparation with the other above summarized disclosures to result in the practice of the above listed instant claims with a reasonable expectation of success. It is noted that a generic disclosure of array preparation practices as in Hozier is reasonably suggests and motivates specifically described species therein as summarized above.

CLAIM OBJECTIONS

Claims 103 and 106-108 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 59-65 and 88-92 are allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., AU 1631 Supervisory Patent Examiner, whose telephone number is (571) 272-0718. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (571) 272-0549.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 12, 2005

Ardin H. Marschel 8/12/05
ARDIN H. MARSCHEL
SUPERVISORY PATENT EXAMINER